

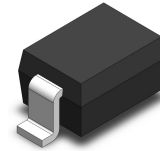
Transient Voltage Suppressors for ESD Protection

SE12D3U01GY

Features

- ◆ Working voltage: 12V
- ◆ Low leakage current: 1.0 μ A @ V_{RWM} (Max)
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

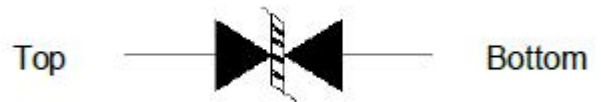
SOD-323



Applications

- ◆ Cellular Handsets and Accessories
- ◆ High Speed I/O Lines
- ◆ Notebooks & Handhelds
- ◆ Peripherals

Pin Configuration



Mechanical Characteristics

- ◆ SOD-323 Package
- ◆ Molding Compound Flammability Rating: UL 94V-0
- ◆ Quantity Per Reel: 3,000pcs
- ◆ Reel Size: 7 inch

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Symbol	Parameter	Value	Units
T_J	Operating Junction Temperature	-55 to +125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
I_{PP}	Peak Pulse Current ($t_P = 8/20\mu\text{s}$)	15	A
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	± 30 ± 30	KV

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Electrical Characteristics (@T_A=25°C Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	--	--	--	12.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	13.3	--	--	V
Reverse Leakage Current	I_R	$V_{RWM} = 12\text{V}$	--	--	1.0	μA
Clamping Voltage	V_C	$I_{PP} = 15\text{A}$, $t_P = 8/20\mu\text{s}$	--	24.0	--	V
Junction Capacitance	C_J	$V_{RWM} = 0\text{V}$, $f = 1\text{MHz}$	--	30.0	--	pF

Characteristic Curves

Fig1. V-I Curve Characteristics (Bi-directional)

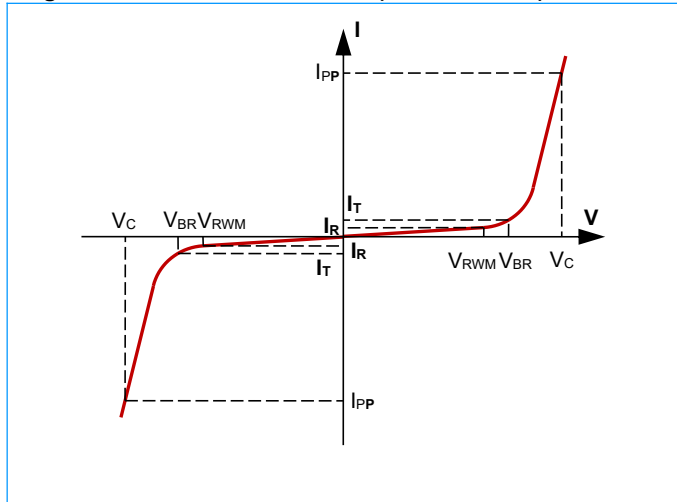


Fig2. Pulse Waveform (8/20μs)

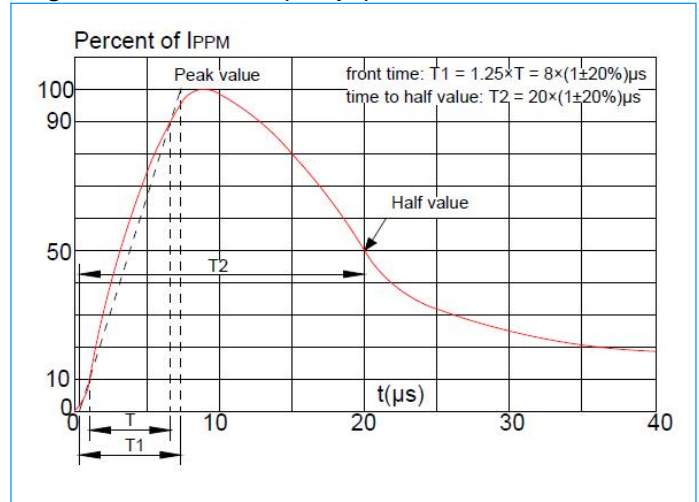


Fig3. Pulse Derating Curve

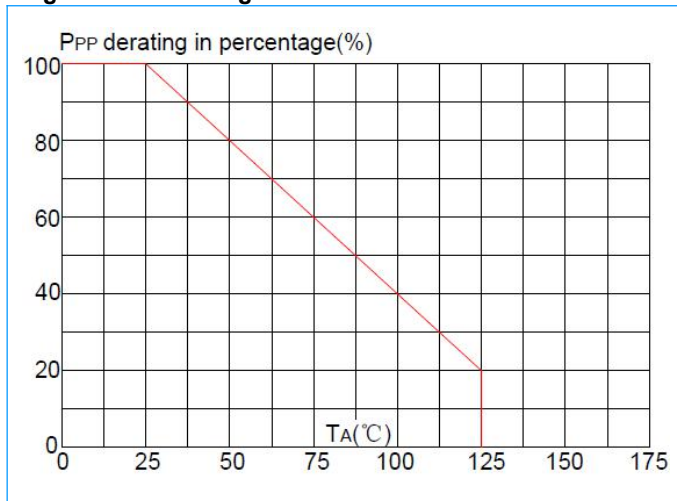
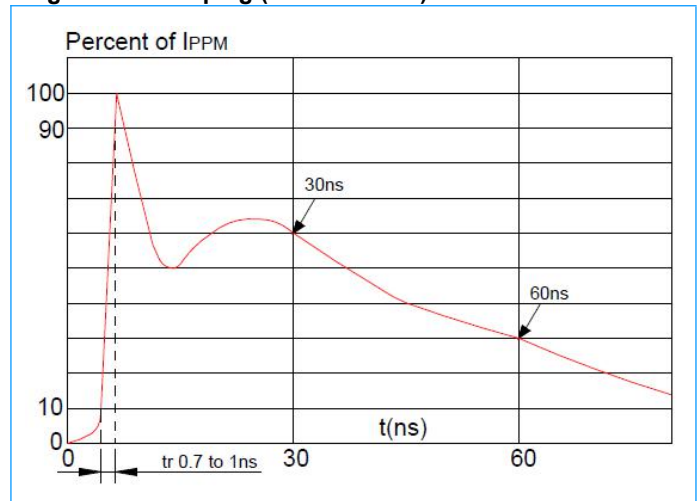


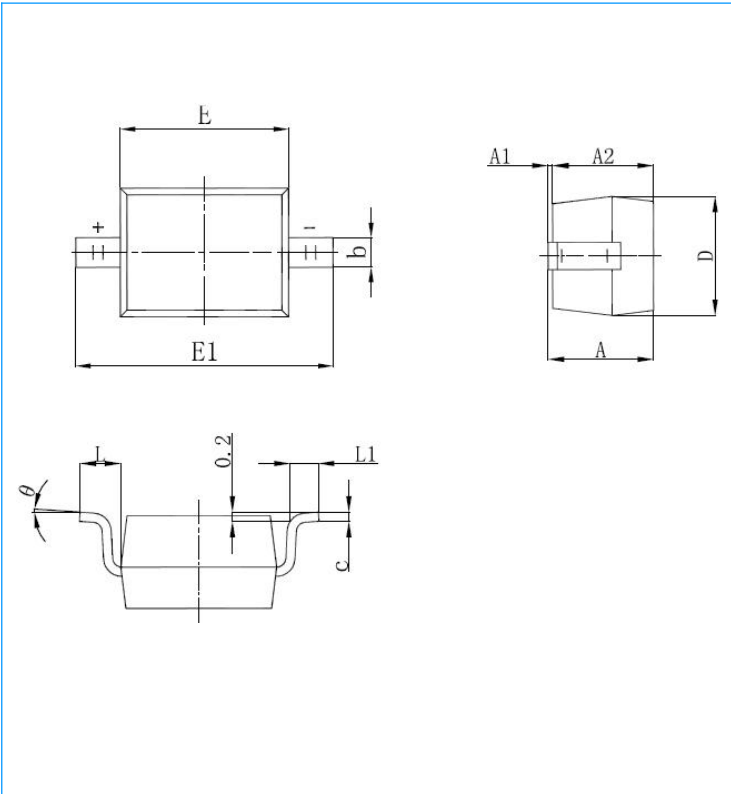
Fig4. ESD Clamping (30kV Contact)



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SOD-323 Package Outline Dimensions



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	--	1.00	--	0.039
A1	0.00	0.10	0.000	0.004
A2	0.80	0.90	0.031	0.035
b	0.25	0.35	0.010	0.014
c	0.08	0.15	0.003	0.006
D	1.20	1.40	0.047	0.055
E	1.60	1.80	0.063	0.071
E1	2.55	2.75	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.25	0.40	0.010	0.016
θ	0°	8°	0°	8°

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